

## MICROFLUIDIC METHODS, DEVICES AND SYSTEMS FOR IN SITU MATERIAL CONCENTRATION

### ABSTRACT OF THE DISCLOSURE

Methods of concentrating materials within microfluidic channel networks by moving materials into regions in which overall velocities of the material are reduced, resulting in stacking of the material within those reduced velocity regions. These methods, devices and systems employ static fluid interfaces to generate the differential velocities, as well as counter-current flow methods, to concentrate materials within microscale channels.